

AMENDMENTS TO THE CLAIMS

Please cancel claims 40-44, 55-57, 59-62, and 76-81 without prejudice or disclaimer, add new claims 82-84 as follows:

1-37. (Cancelled.)

38. (Currently Amended) A method for producing carbon nanowalls, said method comprising:

creating a plasma atmosphere in a plasma-generating area which is at least one region of a reaction chamber by plasmatizing a source material comprising carbon, hydrogen, and fluorine as essential components;

introducing hydrogen radicals generated by decomposing a radical source comprising hydrogen in a radical-generating area, which is disposed in the reaction chamber and is located outside the plasma-generating area, into the plasma atmosphere, the radicals being generated by applying microwaves, Ultra High Frequency (UHF) waves, Very High Frequency (VHF) waves, or Radio Frequency (RF) waves to the radical source; and

growing carbon nanowalls on a base material disposed in the reaction chamber, wherein an amount of the radicals in the at least one region is measured, and wherein at least one of a feed rate of the source material and a feed rate of the radicals is controlled on a basis of the amount of the radicals.

39. (Previously Presented) The method according to claim 38, wherein the radicals are introduced in a direction perpendicular to a surface of the base material.

40-44. (Cancelled.)

45. (Previously Presented) The method according to claim 38, wherein at least one of a feed rate of the source material, a plasmatization degree of the source material, and a feed rate of the radicals is controlled based on a concentration of carbon radicals, hydrogen radicals, or fluorine radicals in the reaction chamber.

46-53. (Cancelled.)

54. (Previously Presented) The method according to claim 38, wherein the base material has no metal catalyst disposed thereon.

55-57. (Cancelled.)

58. (Currently Amended) The method according to claim ~~[[55]]~~ 38, wherein the source material comprises CHF₃.

59-62. (Cancelled.)

63. (Previously Presented) The method according to claim 38, wherein the carbon nanowalls are oriented by tilting a line normal to the base material with respect to a direction of an electric field.

64. (Previously Presented) The method according to claim 38, further comprising:
pretreating the base material by applying the radicals to the base material without plasmatizing the source material before the growing of the carbon nanowalls.

65-74. (Cancelled.)

75. (Currently Amended) A method for producing carbon nanowalls, said method comprising:

creating a plasma atmosphere in at least one region of a reaction chamber by plasmatizing a source material which comprises at least one compound selected from the group consisting of CH₄, CF₄, and CHF₃;

introducing hydrogen radicals generated outside the plasma atmosphere into the plasma atmosphere; and

growing carbon nanowalls on a base material disposed in the reaction chamber.

76-81. (Cancelled.)

82. (New) The method according to claim 38, wherein the hydrogen radicals are generated in an upper area of the reaction chamber.

83. (New) The method according to claim 75, wherein hydrogen radicals are generated in an upper area of the reaction chamber.

84. (New) The method according to claim 75, wherein the hydrogen radicals are generated in an area other than a source gas plasmatizing area.